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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,823	04/26/2005	Bardo Schmitt	267271US0PCT	8884

22850 7590 10/17/2007

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EXAMINER	
BERNSHTEYN, MICHAEL	
ART UNIT	**PAPER NUMBER**
1796	

NOTIFICATION DATE	DELIVERY MODE
10/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/532,823	SCHMITT ET AL.	
	Examiner	Art Unit	
	Michael M. Bernshteyn	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☒ Claim(s) *1 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/26/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action follows a response filed on July 6, 2007. After further consideration, the restriction requirement has been withdrawn.

2. Claims 1-27 are pending.

Claim Objections

3. Claims 1 and 12 are objected to because of the following informalities: the claims recite the expression "a whole number" instead of "an integer". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

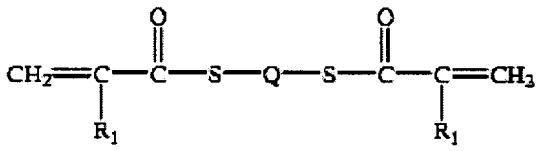
4. Claims 1-21 and 23-27 are rejected under 35 U.S.C. § 102(b) as being anticipated by Smith et al. (U. S. Patent 6,342,571).

With regard to the limitations of claims 1-8 and 10-15, Smith discloses a polymerizable composition comprising:

(a) a mixture of thio(meth)acrylate functional monomers comprising

(i) the first thio(meth)acrylate functional monomer represented by the following general formula I,

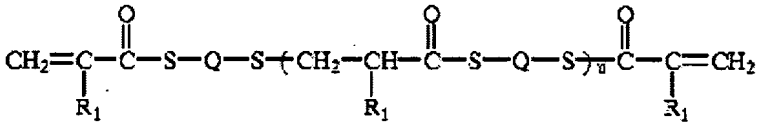
I



in which R_1 is hydrogen or methyl, and Q is a divalent linking group selected from linear or branched C_2–C_{12} alkylene, C_4–C_{12} cyclic alkylene, C_6–C_{14} arylene and C_7–C_{26} alkarylene, the carbon chains of Q may optionally contain at least one linkage selected from the group consisting of ether, thioether and combinations thereof; and

(ii) the second thio(meth)acrylate functional monomer represented by the following general formula II,

II



in which R_1 and Q have the same meanings as described for monomer (a)(i), and u is an integer from 1 to 10, e.g., u may be an integer selected from 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and combinations thereof;

(b) an aromatic monomer having at least two vinyl groups;

(c) a polythiol monomer having at least two thiol groups; and

(d) comonomer selected from

(i) an anhydride monomer having a least one ethylenically unsaturated group;

(ii) a monomer having at least three (meth)acryloyl groups, and

(iii) mixtures of monomers (d)(i) and (d)(ii) (col. 2, line 47 through col. 3, line 44).

Smith discloses that further can be added several other monomers, for example, e(ii) a bis [(meth)acryloyl-terminated]polyethylene glycol monomer having a number average molecular weight from 200 to 2000 grams/mole, which is within the claimed range (Claim 19, col. 21, lines 65-67). This monomer can be exemplified as monomer (A) in instant claim 1.

It is worth to mention that the general formulas (I) and (II) are substantially identical to the instantly claimed formulas (I) and (II) of claim 1.

With regard to the limitations of claim 9, Smith discloses that the total content of compounds of formula (I) and (II) is from 20% by weight to 80% by weight, which is within the claimed range (col. 11, lines 34-40).

With regard to the limitations of claim 16, Smith discloses that the composition also comprises an aromatic monomer having at least two vinyl groups. Examples of aromatic monomers include, but are not limited to: divinyl benzene, e.g., 1,2-divinyl benzene, 1,3-divinyl benzene, 1,4-divinyl benzene and mixtures of structural isomers of divinyl benzene, etc. (col. 6, lines 10-29).

With regard to the limitations of claim 17, Smith exemplifies Bisphenol A di(meth)acrylate (col. 15, lines 65-66, claims 31 and 32, col. 26, lines 36-41).

With regard to the limitations of claim 18, Smith discloses that the polymerization of the polymerizable composition may be accomplished by adding to the composition an initiating amount of material capable of generating free radicals, such as organic peroxy compounds or azobis (organonitrile) compounds, i.e., an initiator. Methods for polymerizing compositions having therein monomers containing radically polymerizable

groups are well known to the skilled artisan and any of those well known techniques may be used to polymerize the afore described polymerizable compositions. Such polymerization methods include thermal polymerization, photopolymerization or a combination thereof (col. 11, lines 47-58).

With regard to the limitations of claims 19, and 25-27, Smith discloses that the polymerizates obtained from polymerization of polymerizable compositions will be solid, and preferably transparent, e.g., suitable for optical or ophthalmic applications. Solid articles that may be prepared from polymerizable compositions include, but are not limited to, optical lenses, such as plano and ophthalmic lenses, sun lenses, windows, automotive transparencies, e.g., windshields, sidelights and backlights, and aircraft transparencies, etc. (col. 13, lines 26-49).

With regard to the limitations of claims 20 and 21, Smith discloses that the polymerizable organic compositions and polymerizates having a refractive index of at least 1.57 and an Abbe number of at least 33, which are prepared from such compositions, and exemplifies that the refractive index is greater than 1.59 in all examples, and the Abbe number is 36 and greater in Examples 1, 3 and 4, which is within the claimed range (abstract, col. 1, lines 5-8, Table 2, col. 16, line 55 through col. 17, line 10).

With regard to the limitations of claim 23, Smith discloses that the transmittance of the plastic to DIN 5036 is greater than 89% in all examples, which is within the claimed range (Table 2, col. 16, line 55 through col. 17, line 10).

With regard to the limitations of claim 24, Smith discloses that the heat distortion temperature (it was determined in accordance with ASTM D 648-95 using a Custom Scientific Instruments Model HDV3 DTUL/Vicat Softening Point Apparatus) is in the range 57-83^{0}C, which is within the claimed range (Table 2, col. 16 line 55 through col. 17, line 13).

5. Claim 22 is rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Smith et al. (U. S. Patent 6,342,571).

The disclosure of Smith's reference resided in § 4 is incorporated herein by reference.

With regard to the limitations of claim 22, Smith discloses that in particular, polymerizable compositions, i.e., Examples 3 and 4, also have improved impact strength relative to comparative compositions, i.e., Examples 1 and 2 (col. 17, lines 43-46).

With regard to impact strength of the plastic to ISO 179/1fU instantly claimed in claim 22, Smith is silent about it. However, in view of substantially identical composition between Smith and instant claims, it is the examiner position that Smith's composition inherently possesses this property. Since the USPTO does not have equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise. ***In re Fitzgerald*** 619 F 2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael M. Bernshteyn
Patent Examiner
Art Unit 1796

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10/09/2007

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